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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,019	12/26/2001	Yoichiro Iritani	2168385US3PCT	5940

22850 7590 06/18/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

JIANG, CHEN WEN

ART UNIT	PAPER NUMBER
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3744

10

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,019

Applicant(s)

IRITANI ET AL.

Examiner

Chen-Wen Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 5-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

EXAMINER'S COMMENT

1. The application has been withdrawn from issue due to a reference can be applied to the claims.

Specification

2. Claim 6 is objected to because of the following informalities: Claim 6 is the same as claim 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Price (U.S. Patent Number 1,946,234).

Price discloses a heat exchanger. Referring to Fig.8, the heat exchanger comprises a container 39 and bundled heat exchanger tubes 48, wherein the total cross sectional area of the tubes in a downstream section (i.e., the section above inlet 44) is smaller than a total cross sectional area of the tubes in an upstream section (i.e., the section immediately before the downstream section). Price's structure is fully capable of acting as the evaporator that is defined by Applicant's specification and thus, the claimed structure is anticipated by Price. For claim 4, Price's heat exchangers tubes 48 in the central portion of the container are read as tubes in the

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downstream section which are spaced from each other by a first gap and the tubes in an upstream section (below exit 45) are spaced from each other by a second gap larger than the first gap.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price (U.S. Patent Number 1,946,234) in view of Ogawa, Koike et al. (U.S. Patent Number 4,843,837) and vice versa.

While the 102 rejection of the claims 1 and 4 over Price is deemed acceptable. Should applicant not agree that Price cannot operate as an evaporator per se, claim 1 is also rejectable over Price in view of Ogawa et al., and vice versa. Price shows (Fig.8) the claimed structure as described in the previous section. Price does not specifically state that the heat exchanger can be used as an evaporator, but does not teach against using it as an evaporator. It therefore would have been obvious to anyone of ordinary skill in the art to use Price's device as an evaporator in light of the Ogawa et al. teaching of using essentially the structure (Fig.27) as an evaporator. Also, in light of the advantages disclosed by Price (page 1, column 2) of using heat exchanger tubes with swedged ends, it would have been obvious to have similarly provided swedged ends on the Ogawa's tubes. Claim 4 is considered to be rejectable over Price in view of Ogawa, and vice versa, for the same reasons as specified above.

Allowable Subject Matter

7. Claims 2,3 and 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275. The examiner can normally be reached on Monday-Thursday from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5648.

Chen-Wen Jiang
Primary Examiner
June 11, 2003

